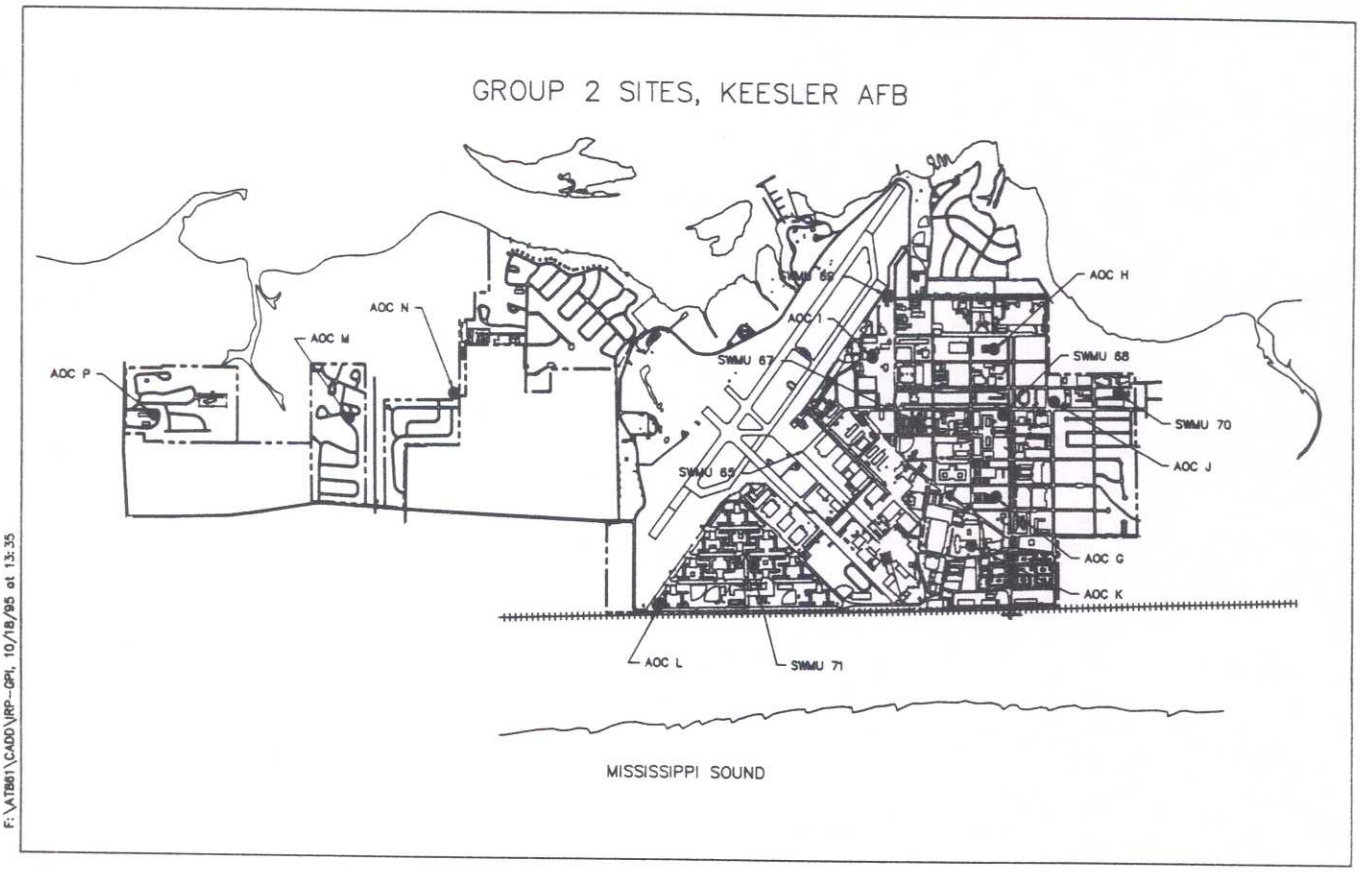
KEESLER AIR FORCE BASE
INSTALLATION RESTORATION PROGRAM
KEESLER AFB, MISSISSIPPI
Statement of Basis - Solid Waste Management Units 65 through 71 and Area of Concern G through N and P (IRP Group 2 Sites)



INTRODUCTION

Keesler AFB is located within the city limits of Biloxi, Mississippi, on the peninsula surrounded by the Back Bay of Biloxi and the Mississippi Sound. Fifteen underground storage tank (UST) sites are listed on Kessler AFB's Hazardous and Solid Wastes Amendments (HSWA) Permit. The sites are referred to as the Group 2 Sites and include Solid Waste Management Units (SWMU) 65 through SWMU 71, Area of Concern (AOC) G through AOC N, and AOC P. The Group 2 Sites are separated into 3 groups based on former site conditions. These 3 groups consist of the water well sites that did not contain USTs, water well sites that contained USTs, and SWMU 65 which consists of the Aero Club UST, the Petroleum, Oil, and Lubricant (POL) Area, and the Aviation Gasoline (AVGAS) Hydrant Fueling System.

Keesler AFB, under the guidance of the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (USEPA), has conducted investigations at the above mentioned sites to determine where cleanup is needed. This paper, called a Statement of Basis, is part of the cleanup planning process and is a requirement of the RCRA

permit issued by USEPA. The proposed remedy (cleanup method) is explained along with any other possible remedies that have been evaluated. Public comment and participation in the remedy selection process is requested.

The proposed remedy for SWMU 65 through 71, AOC G through N, and AOC P (Group 2 Sites) the no further response action planned (NFRAP) alternative. This proposed remedy and other remedial alternatives are further discussed in the Statement of Basis.

The information presented in this Statement of Basis summarizes the information obtained from previous investigations conducted at each of the Group 2 Sites. Detailed information concerning the Group 2 Sites can be found in: the RCRA Facility Assessment (RFA)/CERCLA Preliminary Assessment/Site Investigation/Group 2 Sites Report (March 1995); the RCRA Interim Corrective Measure/Group 2 Sites/POL Area UST Removals/ Assessment Report (January 1995); and Statement of Basis and No Further Response Action Planned Decision for the Group 2 Sites (May 1997). Each of these documents are available in the Administrative Record. The Administrative Record is located at the information repositories identified later in this Statement of Basis.

The public is encouraged to comment and participate in the remedy selection. The public is also encouraged to review the Administrative Record. The USEPA will select a final remedy for SWMU 65 through 71, AOC G through N, and AOC P only after the public comment period has ended, and the comments received are reviewed and considered.

PUBLIC COMMENT PERIOD AND PUBLIC MEETING

The public is encouraged to provide comments regarding the corrective action alternatives provided in the RFA/CERCLA Preliminary Assessment/Site Investigation/Group 2 Sites Report (March 1995) and this Statement of Basis. The public is also invited to provide comments on corrective action alternatives not presented in the above mentioned documents.

Important dates to remember

Public comment period begins:
May 29, 1997

Public Meeting:
Martin Luther King, Jr. Municipal Building
676 Washington Loop
Biloxi, Mississippi
July 28, 1997
6 PM

Public comment period ends:
July 31, 1997

During the public meeting, the U.S. Air Force, USEPA and MDEQ will be available to respond to oral comments and questions. Please note, written comments must be postmarked no later than midnight, July 31, 1997.

The Administrative Record for the Group 2 Sites is available at:

Biloxi Public Library
Reference Section
139 Lameuse Street
Biloxi, Mississippi
Mon., Tue., Wed., 9 am to 8 pm
Thu., Fri., Sat., 9 am to 5 pm

Comments received will be summarized and responses will be provided in the upcoming Responses to Comments document. The Responses to Comments document will be prepared following the close of the public comment period. The comments and corresponding responses, and the Responses to Comments document will be included with the final permit modification in the Administrative Record.

To request further information please contact:

John Chiaramonte Jr.
Keesler AFB, Mississippi
(601) 377-5803 or

Mr. Robert Pope
U.S. Environmental Protection Agency, Region IV
(404) 562-8506
or
Mr. Bob Merrill
Mississippi Department of Environmental Quality
(601) 961-5049

Submit written comments to:

U.S. Environmental Protection Agency
Attention: Mr. Robert Pope
U.S. Environmental Protection Agency
Federal Facilities Branch
61 Forsyth Street
Atlanta, GA 30303

Comments must be postmarked no later than midnight, July 31, 1997.

PROPOSED REMEDY

USEPA is proposing the No Further Response Action Planned remedy to address SWMU 65 through 71, AOC G through N, and AOC P (Group 2 Sites). No costs are associated with the NFRAP remedy.

DESCRIPTION OF WATER WELL SITES CONTAINING NO USTs

AOC G, AOC H, AOC I, AOC J, and AOC N are well houses for water supply wells located at Keesler AFB. The depths of the wells range from 623 feet below ground surface (bgs) to 652 feet bgs.

AOC G, AOC H, AOC I, AOC J, and AOC N Investigations and History

In February 1992, a preliminary reconnaissance consisting of file reviews, personnel interviews, metal detector surveys, and excavations was conducted to determine whether a UST was or had been located at AOC G, AOC H, AOC I, AOC J, and AOC N. Each of these AOCs consists of a building used to house water wells. The purpose of USTs at these sites would have been to supply fuel to generators used as a backup power source for the well pumps. Results of the investigation for each site are summarized below.

At AOC G it was confirmed that the generator had been powered by natural gas and a UST was not located at this site. A metal detector survey and a shovel excavation were conducted at AOC G and no evidence of a UST was detected.

At AOC H, AOC I, and AOC J, metal detector surveys and shovel excavations confirmed that USTs were not located at these sites. Interviews with base personnel indicated that generators were not present at these locations.

Interviews with base personnel concerning AOC N indicated that a portable generator was used as the emergency power supply for the well pump. It was also verified that a generator was not located on site.

AOC G, AOC H, AOC I, AOC J, and AOC N Investigation Results

Results of the investigations at the above mentioned sites confirmed that a UST was not or had not been present at the sites. Since a source of contamination is not currently present at these sites, and has not been present in the past, contamination to the surrounding media from the release of petroleum hydrocarbon constituents has not occurred.

SUMMARY OF RISKS - AOC G, AOC H, AOC I, AOC J, AND AOC I

Results of the investigations at AOC G through AOC J, and AOC N determined that no USTs were currently present at these sites nor were USTs located at these sites in the past. Since USTs were not located at the above mentioned sites, contamination to the soil and/or groundwater as a result of the underground storage of petroleum products does not exist. These sites pose no threat to human health or the environment.

DESCRIPTION OF WATER WELL SITES CONTAINING USTs

SWMU 67 through SWMU 71, and AOC K through AOC M consist of well houses for water supply wells at Keesler AFB. The water wells at these locations range in depth from 611 feet bgs to 817 feet bgs. AOC P is an abandoned radar site located at Annex #1. The USTs located at these sites contained fuel to power generators used as an emergency power source for the well pumps and the radar. Each of these sites consisted of a concrete block building surrounded by grass. There are no records of past releases at these sites.

SWMU 67 Through SWMU 71, AOC K, AOC L, AOC M, and AOC P Investigations and History

In March 1993, the nine sites containing USTs were investigated as part of the RFA to determine if the soil had been impacted as a result of past activities conducted at the site. Thirty-three soil samples were collected and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), and lead. Results of the RFA indicated that concentrations of BTEX, TPH, and lead were below the UST cleanup levels for Mississippi. Based on these results, it was determined that each site should be closed under the Mississippi Department of Environmental Quality (MDEQ) UST Program.

From August to September 1994, closure activities were conducted at the sites containing USTs. After the removal of each tank, soil samples were collected from each wall of the excavation and one soil and/or groundwater sample was collected from the base of the excavation. Soil removed from the excavations was stockpiled and sampled for characterization. Forty-one soil samples were collected from the tank pit excavations, 10 samples were collected from the soil stockpiles, and 2 groundwater samples were collected from the excavation pit floors. Soil and water samples from the excavation were analyzed for TPH. Soil samples with elevated organic vapor analyses (OVA) readings were also analyzed for BTEX. Samples collected from the soil stockpiles were analyzed for TPH and in some cases BTEX if elevated OVA readings were detected. Sample results from the UST Removal and Excavation Assessment indicated that only one site (AOC P) would require further assessment. TPH was detected in the groundwater sample collected at the base of the excavation at a concentration exceeding the MDEQ cleanup level. All of the soil samples collected at AOC P were below MDEQ the MDEQ cleanup level for TPH in soil. TPH and BTEX concentrations were below MDEQ cleanup levels at the remaining sites and a UST Closure Report was submitted to the MDEQ, Office of Pollution Control.

In April 1995, further site assessment activities were conducted at AOC P. Three soil borings were drilled and a monitoring well was installed in one of the boring locations. Ten soil samples and one groundwater sample were collected and submitted for analysis of the diesel fraction of petroleum hydrocarbons. Concentrations of diesel in the soil and groundwater were below laboratory detection limits and site AOC P was recommended for closure.

Investigation Results for SWMU 67 through 71, AOC K through M, and AOC P (Water Well Sites Containing USTs)

Investigations conducted at the water well sites containing USTs indicated contamination at site AOC P only. Further assessment of this site indicated hydrocarbon constituent concentrations below MDEQ cleanup levels. BTEX and/or TPH concentrations are currently below MDEQ cleanup levels at SWMU 67 through 71, AOC K through M, and AOC P (Water Well sites which contained USTs).

SUMMARY OF RISKS - SWMU 67 THROUGH 71, AOC K THROUGH M, AND AOC P

Investigations conducted at the sites which contained USTs indicate that contamination to the soil and groundwater as a result of the underground storage of petroleum products does not exist. The possibility of future contamination has been eliminated with the removal of the USTs. SWMU 67 through 71, AOC K through M, and AOC P pose no threat to human health or the environment.

DESCRIPTION OF SWMU 65

SWMU 65 consists of SWMU 65N (Aero Club UST), SWMU 65S (POL area), and the SWMU 65M (AVGAS Hydrant Fueling System). SWMU 65N (Aero Club UST) was located at the north end of SWMU 65 and was used to store fuel for small aircraft. SWMU 65S (POL area), located at the south terminus of SWMU 65, previously contained six 25,000 gallon USTs and was the storage center for aviation fuel delivered to the base. The POL area is currently active and has 2 above ground tanks for storing aviation fuel. SWMU 65M (AVGAS line) is an underground pipeline that was used to transport fuels from the POL area to the former engine test cell building.

SWMU 65 Investigations and History

The SWMU 65N (Aero Club UST) was installed in 1966. The UST was constructed of steel with an asphalt coating and has a capacity of 1,900 gallons. During a tank filling operation in 1990, an undetermined amount of AVGAS was spilled on the pavement surface. One of two monitoring wells installed at the site to monitor tank leakage had approximately 2 inches of fuel product in the well. Product thickness measurements taken in 1991 indicated a product thickness of 0.01 inches. Base personnel indicate sporadic occurrences of product in the well.

In 1993 the Aero Club was investigated as part of the RFA. Twenty-two soil vapor samples were collected from the area of the UST. The highest concentration of soil vapor was detected in the area between the UST and the firehouse. Groundwater samples were collected from the monitoring wells surrounding the UST and analyzed for BTEX, TPH, and lead. BTEX and TPH concentrations were below MDEQ regulated limits. Lead concentrations exceeded the action level in both groundwater samples.

The Aero Club was closed in 1995, and the UST was removed in the summer of 1996. The UST was removed following MDEQ requirements, and soils around the UST were sampled and did not contain petroleum hydrocarbons above MDEQ criteria. The site was closed in accordance with MDEQ regulations.

The six 25,000 gallon USTs formerly located at the POL area were constructed of steel with an asphalt coating. The tanks, installed in 1946, were maintained in accordance with MDEQ requirements for UST management. Six monitoring wells were installed around the perimeter to comply with MDEQ requirements.

A Phase I Site Assessment was conducted at SWMU 65S (POL area) in June 1991. This investigation was initiated after product was detected in one of the monitoring wells during a routine weekly site check conducted by Keesler personnel. Eighteen soil samples and three groundwater samples were collected and analyzed for BTEX and TPH. Results of the investigation confirmed that the media around the site was contaminated with TPH above MDEQ cleanup criteria.

In 1991, interim remedial actions were implemented at the POL area in an attempt to remove the free product from the monitoring well. A product recovery system was installed in September 1991 and remained in operation until December 1991. The system was shut down due to inadequate product recovery resulting from a low hydraulic gradient.

In June 1993, groundwater samples collected from eight of the nine monitoring wells located at the POL area indicated that petroleum hydrocarbon constituents were not present at levels above MDEQ

regulated levels. Monitoring well MW-1 was not sampled due to presence of free product in the well.

In August 1994 a site characterization study was conducted at the POL area to provide information concerning the amount and distribution of contamination that could possibly be encountered during the removal of the USTs. Eight soil borings and five monitoring wells were installed as part of the investigation. Analysis of 27 soil samples collected during the investigation did not indicate concentrations of BTEX at levels above MDEQ regulated limits. TPH concentrations exceeded the MDEQ cleanup level for soil within the tank pit area and in isolated locations outside of the tank pit area. BTEX and TPH concentrations in groundwater samples collected from monitoring wells surrounding the POL area were all below MDEQ cleanup levels. BTEX and TPH levels in groundwater were also below MDEQ regulated limits within the tank pit area. Free product was not detected in any of the monitoring wells sampled.

Lead concentrations in groundwater exceeded MDEQ action levels, however it was not determined whether the lead was due to natural or human causes. It is possible that lead levels may be influenced by the turbidity of the groundwater. Six of the eight filtered samples were nondetects for lead, while only one of the unfiltered samples showed lead levels below the detection limit. This data presents the possibility that elevated lead levels may be the result of natural lead containing material in suspension and not dissolved lead in groundwater.

In October 1994, activities for the removal of the USTs and associated piping were initiated at the POL area. Eight soil samples were collected from the base of the trenches associated with the underground piping. BTEX and lead concentrations were all below the MDEQ regulated limits. TPH concentrations exceeded the cleanup level in two of soil samples collected from the trenches.

Three soil samples and four groundwater samples were collected from the excavation pit of the USTs. BTEX concentrations were below the MDEQ cleanup level in all of the soil and groundwater samples collected. TPH exceeded the MDEQ cleanup level in one soil sample and three groundwater samples. Lead concentrations exceeded the MDEQ cleanup level in all of the groundwater samples collected.

SWMU 65M (AVGAS Hydrant Fueling System) consists of approximately 4,700 linear feet of underground pipe that extends from SWMU 65S (POL area) to SWMU 65N (Aero Club UST). The line is constructed of steel piping ranging from eight inches to four inches in diameter. During previous maintenance and renovation activities at the base, sections of the line were reported to be cut and removed from the ground. Base personnel reported that the line was removed in several locations and fuel spills occurred as a result of removing the line. The spills occurred in an area west of Hangar 5 and south of Building 4233. There were no records documenting these occurrences.

In 1993 the AVGAS line was investigated as part of the RFA. Approximately 241 soil vapor samples were collected along both sides of the entire length of the line. Based on the results of the study, six areas along the AVGAS line were identified as potential petroleum release areas.

Forty soil borings were advanced in areas with the highest soil gas readings as determined from the soil vapor study. Thirty-nine soil samples were collected and analyzed for BTEX, TPH, and lead. Only one sample had concentration of BTEX and TPH which exceeded the MDEQ action levels. Lead concentrations were below the MDEQ regulated level in all of the soil samples collected.

Eight monitoring wells were installed along the AVGAS line. Well placement was determined based on soil gas results, soil sample results, and information about areas where possible spills may have occurred in the past. Concentrations of BTEX and TPH were below the MDEQ regulated limits in the groundwater samples collected from each well. Lead concentrations exceeded the action level in all of the water samples analyzed.

Investigation Results for SWM 65

Soil samples collected during the investigation of SWMU 65 indicated elevated BTEX levels in one sample collected along the abandoned AVGAS line. BTEX levels in all other samples collected were below the MDEQ cleanup criteria for BTEX in soil. TPH levels in soil exceeded the MDEQ cleanup criteria in one sample along the abandoned AVGAS line and in one sample collected from the tank pit area at SWMU 65S (POL area) and in localized areas outside the tank pit area. Lead concentrations were below the MDEQ regulated level in all of the soil samples collected.

Groundwater samples collected during the investigations conducted at SWMU 65 indicate BTEX concentrations below the MDEQ cleanup criteria at SWMU 65N (Aero Club), SWMU 65S (POL area), and SWMU 65M (abandoned AVGAS line). TPH in groundwater exceeded the MDEQ cleanup criteria in three of the groundwater samples collected after the removal of the USTs at SWMU 65S (POL area). TPH did not exceed the MDEQ cleanup criteria for TPH in water at SWMU 65N (Aero Club) or SWMU 65M (abandoned AVGAS line). Lead concentrations exceeded the action level for lead in groundwater at each of the areas investigated at SWMU 65. It is possible that lead levels may be influenced by the turbidity of the groundwater. Six of the eight filtered samples collected during the site characterization at SWMU 65S (POL area) were nondetects for lead, while only one of the unfiltered samples showed levels below the detection limit. This data presents the possibility that elevated lead levels may be the result of natural lead containing material in suspension and not dissolved lead in groundwater.

SUMMARY OF SWMU 65 RISKS

Investigations conducted at SWMU 65 indicate that TPH concentrations exceeded the MDEQ action level for soil within the tank pit area at SWMU 65S (POL area) and in localized areas outside the tank pit area. TPH concentrations in groundwater exceed the MDEQ action level only within the tank pit area at SWMU 65S (POL area). One location at SWMU 65M (along the abandoned AVGAS line) exceeded MDEQ action levels for TPH and BTEX in soil. The POL area remains an active fuels distribution center, with active USTs and aboveground fuel storage tanks. After the USTs were removed from SWMU 65S (POL area), clean closure was granted by MDEQ (see attached letter). SWMU 65M (abandoned AVGAS line) is located adjacent to active taxiways which are subjected to aircraft refueling and aircraft and vehicle traffic. The Aero Club was closed in 1995, and the UST was removed in 1996. Current site conditions at the three sites comprising SWMU 65 pose no threat to human health or the environment.

CORRECTIVE ACTION SCOPE

The Corrective Action proposed in this Statement of Basis is intended to be the only corrective action taken at the Group 2 Sites which are comprised of SWMU 65 through SWMU 71, AOC G through AOC N, and AOC P. The no further action alternative poses no threat to human health or the environment based on the current conditions at each site.

CURRENT ACTIVITIES FOR THE GROUP 2 SITES

A Decision Document recommending no further action at the Group 2 Sites was prepared and submitted to the EPA in March of 1996. This document is available in the Administrative Record. The remaining activities for SWMUs 67 through 71, AOCs G through N, and AOC P, to modify Keesler AFB's RCRA permit to reflect their NFRAP status.

CORRECTIVE ACTION ALTERNATIVES SUMMARY

AOC G, AOC H, AOC I, AOC J, and AOC N - There is no substantial threat or potential for release which could adversely impact

human health or the environment. Therefore, no rationale can be identified for further action at AOC G, AOC H, AOC I, AOC J, and AOC N. Lacking evidence of a possible source of contamination at each of these sites, the only alternative control measure identified for evaluation was no further action.

SWMU 67, SWMU 68, SWMU 69, SWMU 70, SWMU 71, AOC K, AOC M, and AOC P - Two alternatives were evaluated for the sites formerly containing USTs: no further action and additional study. Since the USTs have been removed, no substantial threat or potential for release which could adversely impact human health or the environment exists at these sites. Therefore, no rationale can be identified for further action at SWMUs 67 through 71, AOC K, AOC M, and AOC P.

SWMU 65: Aero Club (SWMU 65N), POL Area (SWMU 65 S), and AVGAS Line (SWMU 65M) - Two alternatives were evaluated for SWMU 65: no further action and additional study. The USTs at the POL area have been removed and clean closure has been granted by the MDEQ (see attached letter). The Aero Club UST was removed in 1996 and received clean closure from MDEQ. Past activities at the abandoned AVGAS line do not pose a risk to human health or the environment. Based on the current site conditions at SWMU 65, no further action is recommended at this site.